


SEAT BELT SYSTEM




SB

-
1. General Description
 2. Pretensioner Connector
 3. Inspection Locations after a Collision
 4. Seat Belt Warning System
 5. Front Seat Belt
 6. Rear Seat Belt
 7. Disposal of Pretensioner

SEAT BELT SYSTEM > General Description

CAUTION

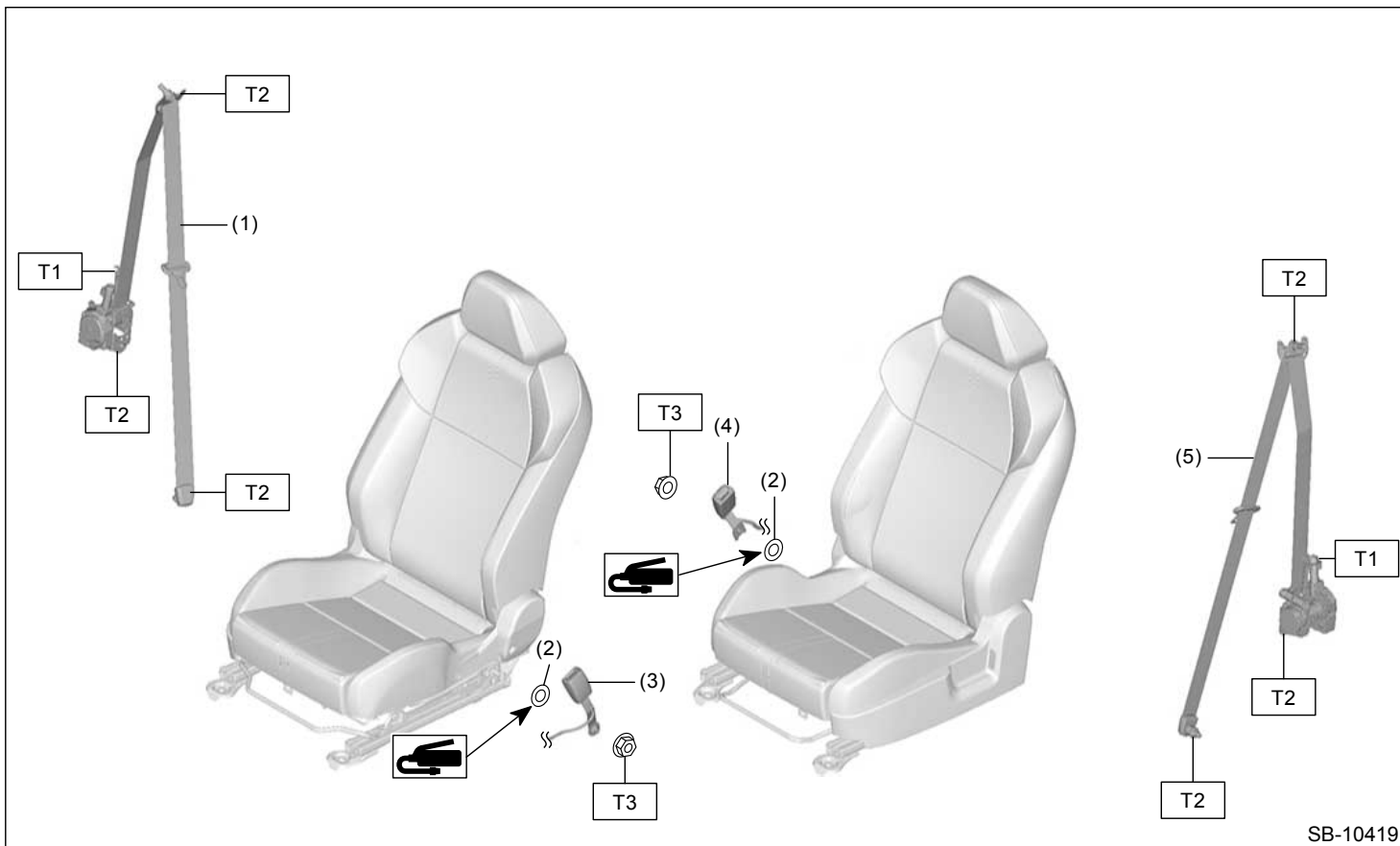
For details of the following precautions for seat belt pretensioner, refer to "AIRBAG SYSTEM" section.  [Ref. to AIRBAG SYSTEM>General Description>CAUTION.](#)

- When performing service operation, refer to "Repair Contents" in "General Description".  [Ref. to REPAIR CONTENTS>Repair Contents.](#)
- Before performing vehicle maintenance, turn the ignition switch to OFF, and wait for 60 seconds or more after disconnecting the ground terminal from the battery sensor.  [Ref. to REPAIR CONTENTS>NOTE > BATTERY.](#)
- Do not drop or apply any impact to the pretensioner.
- Do not allow oil, grease or water to come in contact with the pretensioner.
- Do not expose the pretensioner to high temperature or flame.
- Do not allow current to flow through or voltage to reach the pretensioner. Do not use a circuit tester to check resistance of the pretensioner.
- Do not disassemble or attempt to repair the pretensioner. If it is dented, cracked or deformed, replace it with a new genuine part.
- Do not use the airbag or pretensioner parts from other vehicles. Always replace parts with new genuine parts.
- When handling a seat belt with deployed pretensioner, wear gloves and goggles. Wash your hands afterwards.
- Do not reuse a seat belt with deployed pretensioner.
- Before disposal, make sure to perform an operation process to the pretensioners.  [Ref. to SEAT BELT SYSTEM>Disposal of Pretensioner>PROCEDURE.](#)
- If material enters the eyes or contacts skin during operation process, wash it away with clean water, and then consult a doctor.

SEAT BELT SYSTEM > General Description

COMPONENT

1. FRONT SEAT BELT



(1) Belt ASSY front OUT RH

(4) Belt ASSY front INN LH *

Tightening torque: N·m (kgf-m, ft-lb)

(2) Spring wave washer


(5) Belt ASSY front OUT LH

T1: 7.5 (0.8, 5.5)

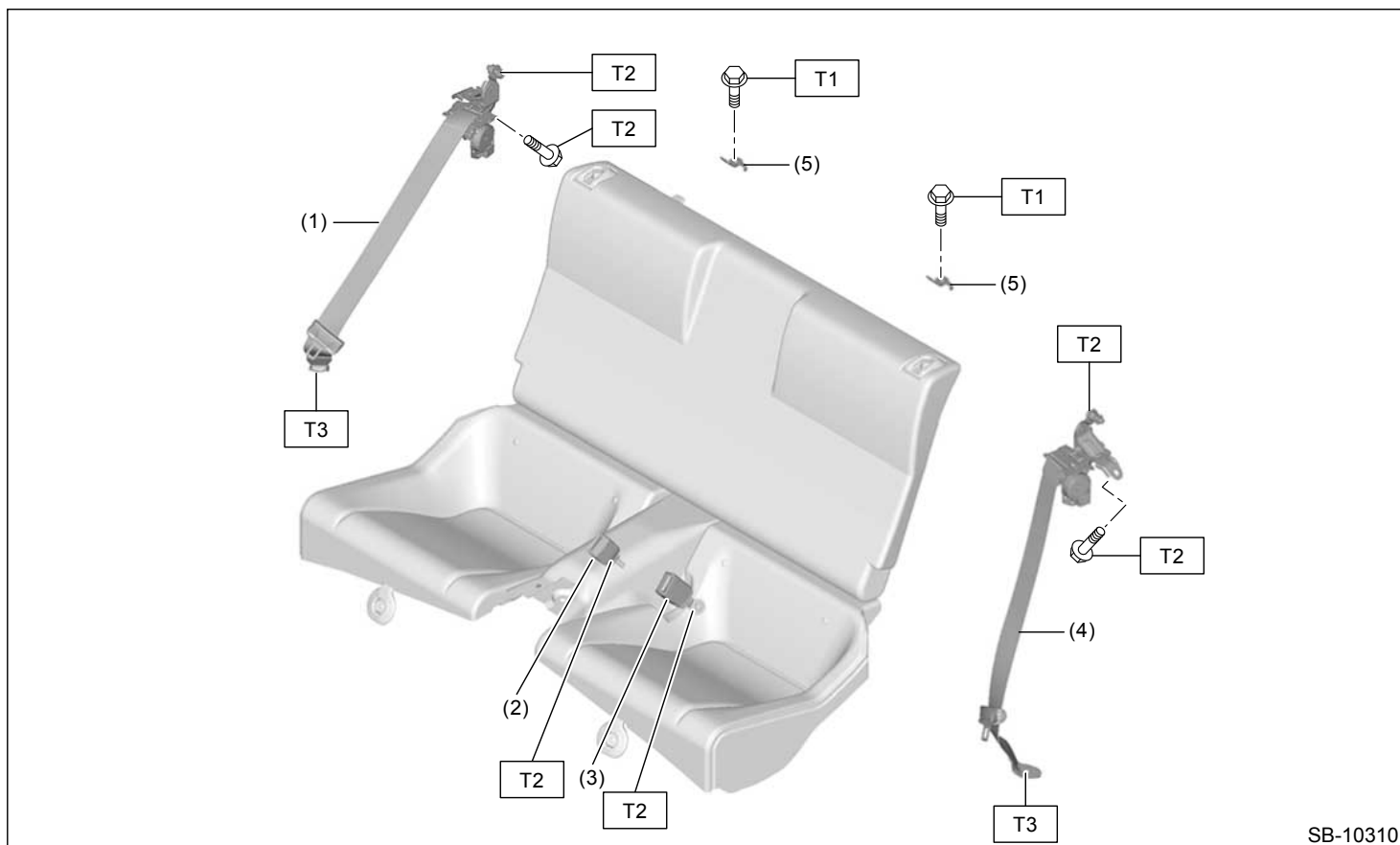
(3) Belt ASSY front INN RH *

T2: 30 (3.1, 22.1)

T3: 38 (3.9, 28.0)

*: Apply grease when replacing the belt assembly front INN.  Ref. to SEAT BELT SYSTEM>Front Seat Belt>INSTALLATION > BELT ASSEMBLY FRONT INN.

2. REAR SEAT BELT



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(1) Belt ASSY rear OUT RH

(4) Belt ASSY rear OUT LH

(2) Belt ASSY rear INN RH


(5) Child anchor

(3) Belt ASSY rear INN LH

Tightening torque: N·m (kgf-m, ft-lb)

T1: 25 (2.5, 18.4)

T2: 30 (3.1, 22.1)


T3:  **Ref. to SEAT BELT SYSTEM>Rear Seat Belt>INSTALLATION > BELT ASSEMBLY REAR OUT.**

SEAT BELT SYSTEM > General Description


INSPECTION

For inspection of seat belt pretensioner, refer to the followings.


1. BASIC INSPECTION

For basic inspection, refer to "Basic Diagnostic Procedure" of "AIRBAG (DIAGNOSTICS)" section.  **Ref. to AIRBAG(DIAGNOSTICS)>Basic Diagnostic Procedure.**

2. SYSTEM BLOCK DIAGRAM

For system block diagram, refer to "System Block Diagram" in "AIRBAG (DIAGNOSTICS)" section.  **Ref. to AIRBAG(DIAGNOSTICS)>General Description>SYSTEM BLOCK DIAGRAM.**


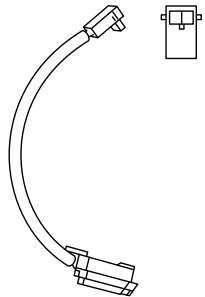
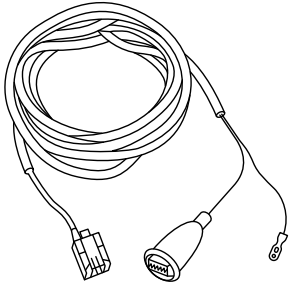
3. MODULE I/O SIGNAL

For the specification (electrical component), refer to "Control Module I/O Signal" of "AIRBAG (DIAGNOSTICS)" section.  [Ref. to AIRBAG\(DIAGNOSTICS\)>Control Module I/O Signal.](#)

SEAT BELT SYSTEM > General Description

PREPARATION TOOL

1. SUBARU SPECIAL TOOL


ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 STSSM4	—	SUBARU SELECT MONITOR 4	Used for setting of each function and troubleshooting for electrical system. Note: <ul style="list-style-type: none">• For detailed operation procedures, refer to "Help" of application.• Used together with interface for Subaru Select Monitor (such as DST-i and DST-010).
 ST98299SA010	98299SA010	TEST HARNESS ADAPTER D	<ul style="list-style-type: none">• Used for operation process of front pretensioner.• Used for operation process of adaptive force limiter.• Used together with AIRBAG DEPLOYMENT TOOL. (98299PA030)
 ST98299PA030	98299PA030	AIRBAG DEPLOYMENT TOOL	<ul style="list-style-type: none">• Used for operation process of pretensioner.• Used together with each test harness adapter.

2. OTHER

	REMARKS
Circuit tester	Used for measuring resistance, voltage and current.


SEAT BELT SYSTEM > Pretensioner Connector

NOTE

For details of front seat belt pretensioner or adaptive force limiter connector, refer to "Airbag Connector" in "AIRBAG SYSTEM" section.  [Ref. to AIRBAG SYSTEM>Airbag Connector>PROCEDURE.](#)

SEAT BELT SYSTEM > Inspection Locations after a Collision

INSPECTION

For inspection locations after a collision, refer to "Inspection Locations after a Collision" of the "AIRBAG SYSTEM" section.  [Ref. to AIRBAG SYSTEM>Inspection Locations after a Collision.](#)


SEAT BELT SYSTEM > Seat Belt Warning System

WIRING DIAGRAM

1. COMBINATION METER SYSTEM

For the wiring diagram, refer to "Combination Meter System" in the wiring diagram.  [Ref. to WIRING SYSTEM>Combination Meter System>WIRING DIAGRAM.](#)


2. SEAT BELT WARNING SYSTEM

For the wiring diagram, refer to "Seat Belt Warning Light System" in the wiring diagram.  [Ref. to WIRING SYSTEM>Seat Belt Warning System>WIRING DIAGRAM.](#)

SEAT BELT SYSTEM > Seat Belt Warning System

INSPECTION

Caution:

- **Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM".**  [Ref. to AIRBAG SYSTEM>General Description>CAUTION.](#)
- **When inspecting the airbag main harness, disconnect the connectors of the driver's airbag module, passenger's airbag module and knee airbag module for safety reasons.**
- **When inspecting the airbag rear harness, disconnect the side airbag module connector, curtain airbag module connector and seat belt pretensioner connector for safety reasons.**

Trouble symptom:

- Seat belt warning light for each seat does not illuminate (blink) or it remains illuminating (blinking).
- Warning buzzer does not beep.

1. CHECK DRIVER'S SEAT BELT WARNING LIGHT

1. Turn the ignition switch to ON.
2. Sit on the driver's seat, and check that the driver's seat belt warning light in the combination meter assembly blinks when the seat belt tongue plate is not inserted in the buckle.
3. Check that the driver's seat belt warning light blinks for 6 seconds and then turns on.
4. While sitting on the driver's seat, check that the driver's seat belt warning light in the combination meter assembly turns off when the seat belt tongue plate is inserted in the buckle.

2. CHECK PASSENGER'S SEAT BELT WARNING LIGHT

1. Turn the ignition switch to ON.
2. Sit on the passenger's seat, and check that the passenger's seat belt warning light in the warning box blinks when the seat belt tongue plate is not inserted in the buckle.
3. Check that the passenger's seat belt warning light blinks for 6 seconds and then turns on.
4. While sitting the passenger's seat, check that the passenger's seat belt warning light in the warning box turns off when the seat belt tongue plate is inserted in the buckle.

3. CHECK REAR SEAT BELT WARNING LIGHT

1. Turn the ignition switch to ON.
2. Sit on the rear seat, and check that the corresponding rear seat belt warning light in the warning box turns on when the seat belt tongue plate is not inserted in the buckle.
3. Sit on the rear seat and check that the corresponding rear seat belt warning light in the warning box turns off when each seat belt tongue plate is inserted in the buckle.

4. CHECK DRIVER'S SEAT BELT WARNING BUZZER

1. Lift up the vehicle.
2. Turn the ignition switch to ON and start the engine.
3. Drive the vehicle at 6.1 — 19 km/h (4 — 12 MPH) while the driver's seat belt tongue plate is not inserted in the buckle. Check that the buzzer in the combination meter (volume: low) sounds intermittently and the warning light blinks.
4. Drive the vehicle at 20 km/h (12 MPH) or more while the driver's seat belt tongue plate is not inserted in the buckle. Check that the buzzer in the combination meter (volume: high) sounds intermittently and the warning light blinks.
5. Insert the driver's seat belt tongue plate in the buckle to stop the buzzer.
6. After the buzzer stops, check steps 3. — 4.
7. After implementing step 5., drive the vehicle at 6.1 — 19 km/h (4 — 12 MPH). Check that the buzzer (volume: low) sounds again when the seat belt is unfastened.
8. Drop the vehicle speed to 1.75 km/h (1 MPH) or less to stop the buzzer.
9. Insert the seat belt tongue plate in the buckle and then drive the vehicle at 20 km/h (12 MPH) or more. Check that the buzzer (volume: high) sounds again when the seat belt is unfastened.
10. After implementing step 5., set the shift position to "R" and then set it to "D" (AT model) or a position other than "R" (MT model). Check that the buzzer (volume: low) sounds again by driving the vehicle at 6.1 — 19 km/h (4 — 12 MPH) while the seat belt tongue plate is not inserted in the buckle.
11. Drop the vehicle speed to 1.75 km/h (1 MPH) or less to stop the buzzer.
12. Set the shift position to "R" and then set it to "D" (AT model) or a position other than "R" (MT model). Check that the buzzer (volume: high) sounds again by driving the vehicle at 20 km/h (12 MPH) or more while the seat belt tongue plate is not inserted in the buckle.

5. CHECK PASSENGER'S SEAT BELT WARNING BUZZER

1. Lift up the vehicle.
2. Turn the ignition switch to ON and start the engine.
3. Drive the vehicle at 6.1 — 19 km/h (4 — 12 MPH) while the passenger's seat belt tongue plate is not inserted in the buckle. Check that the buzzer in the combination meter (volume: low) sounds intermittently and the warning light blinks.
4. Drive the vehicle at 20 km/h (12 MPH) or more while the passenger's seat belt tongue plate is not inserted in the buckle. Check that the buzzer in the combination meter (volume: high) sounds intermittently and the warning light blinks.
5. Insert the passenger's seat belt tongue plate in the buckle to stop the buzzer.
6. After the buzzer stops, check steps 3. — 4.
7. After implementing step 5., drive the vehicle at 6.1 — 19 km/h (4 — 12 MPH). Check that the buzzer (volume: low) sounds again when the seat belt is unfastened.
8. Drop the vehicle speed to 1.75 km/h (1 MPH) or less to stop the buzzer.

- 9.** Insert the seat belt tongue plate in the buckle and then drive the vehicle at 20 km/h (12 MPH) or more. Check that the buzzer (volume: high) sounds again when the seat belt is unfastened.
- 10.** After implementing step 5., set the shift position to "R" and then set it to "D" (AT model) or a position other than "R" (MT model). Check that the buzzer (volume: low) sounds again by driving the vehicle at 6.1 — 19 km/h (4 — 12 MPH) while the seat belt tongue plate is not inserted in the buckle.
- 11.** Drop the vehicle speed to 1.75 km/h (1 MPH) or less to stop the buzzer.
- 12.** Set the shift position to "R" and then set it to "D" (AT model) or a position other than "R" (MT model). Check that the buzzer (volume: high) sounds again by driving the vehicle at 20 km/h (12 MPH) or more while the seat belt tongue plate is not inserted in the buckle.

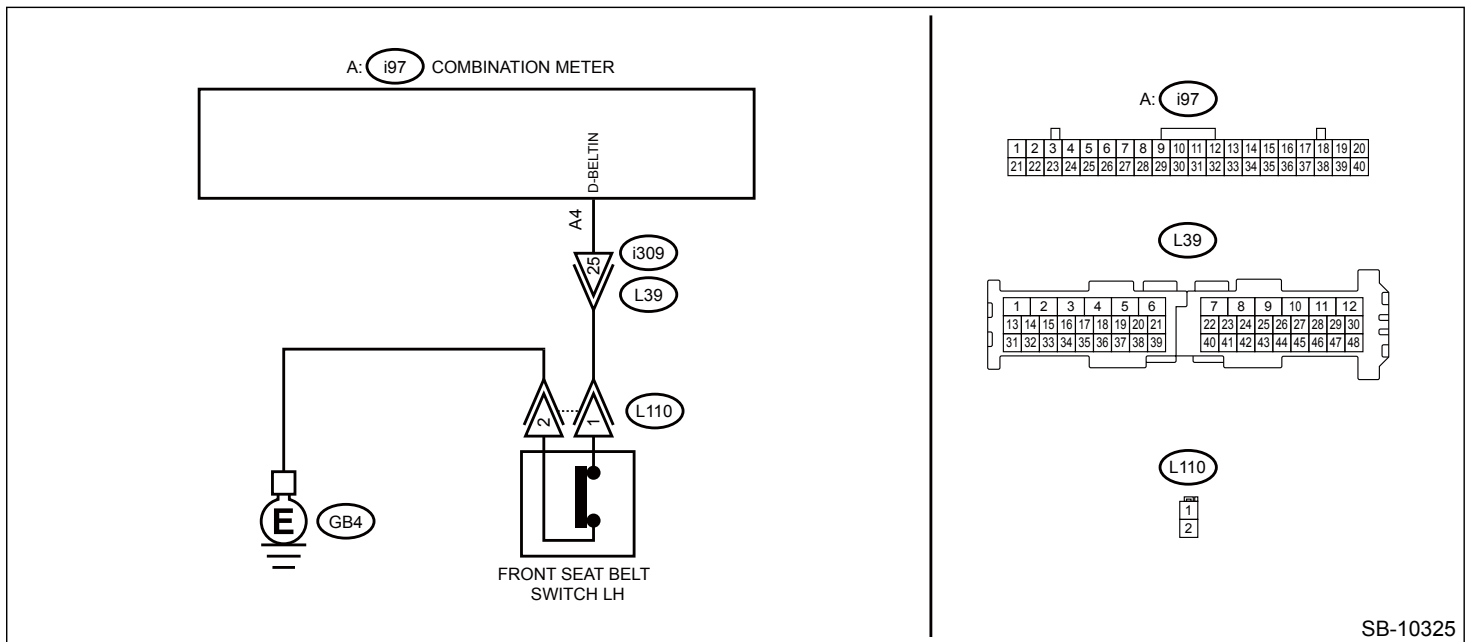
6. CHECK REAR SEAT BELT WARNING BUZZER

- 1.** Lift up the vehicle.
- 2.** Turn the ignition switch to ON and start the engine.
- 3.** Insert the driver's seat belt tongue plate in the buckle.
- 4.** Sit on the corresponding rear seat and then drive the vehicle at 20 km/h (12 MPH) or more while the seat belt tongue plate is not inserted in the buckle. Check that the buzzer in the combination meter sounds intermittently and the warning light blinks.
- 5.** Turn the ignition switch to OFF when the buzzer stops, and start the engine again. Check that the buzzer sounds again by driving the vehicle at 20 km/h (12 MPH) or more while the seat belt tongue plate is not inserted in the buckle.
- 6.** Insert the seat belt tongue plate in the buckle when the buzzer stops, and drive the vehicle at 20 km/h (12 MPH) or more. Check that the buzzer sounds again when the seat belt is unfastened.
- 7.** After stopping the buzzer, set the shift position to "R" and then set it to "D" (AT model) or a position other than "R" (MT model). Check that the buzzer sounds again by driving the vehicle at 20 km/h (12 MPH) or more while the seat belt tongue plate is not inserted in the buckle.

7. DRIVER'S SEAT BELT WARNING LIGHT DOES NOT ILLUMINATE

Wiring diagram:

Seat belt warning system  [Ref. to WIRING SYSTEM>Seat Belt Warning System>WIRING DIAGRAM.](#)



SB-10325

1. CHECK FUNCTION.

1. Turn the ignition switch to ON.
2. Using the Subaru Select Monitor, perform the [Driver side seat belt] function check using the [Active Test] of [Combination Meter]. [Ref. to COMBINATION METER \(DIAGNOSTICS\)>Active Test.](#)

Does the driver's seat belt warning light illuminate (blink) or go off?

Yes


[Go to 2.](#)

No

Replace the combination meter assembly. [Ref. to INSTRUMENTATION/DRIVER INFO>Combination Meter.](#)


2. CHECK DRIVER'S SEAT BELT BUCKLE SWITCH.




1. Turn the ignition switch to OFF.
2. Perform unit inspection for driver's seat belt buckle switch.  [Ref. to SEAT BELT SYSTEM>Front Seat Belt>INSPECTION.](#)

Is the check result OK?

Yes

 [Go to 3.](#)

No

Replace the belt assembly front INN RH.  [Ref. to SEAT BELT SYSTEM>Front Seat Belt.](#)

3. CHECK HARNESS.



1. Disconnect the combination meter connector and the driver's seat belt buckle switch connector.
2. Check for short circuit to battery, open circuit and short circuit to ground between the combination meter and the driver's seat belt buckle switch.

Connector & terminal

(L110) No. 1 — (i97) No. 4:

Is the harness normal?

Yes

 [Go to 4.](#)

No

Repair or replace the defective part.

4. CHECK HARNESS.




Measure the resistance between the driver's seat belt buckle switch connector and chassis ground.

Connector & terminal

(L110) No. 2 — Chassis ground:

Is the harness normal?

Yes

Replace the combination meter assembly.  [Ref. to INSTRUMENTATION/DRIVER INFO>Combination Meter.](#)

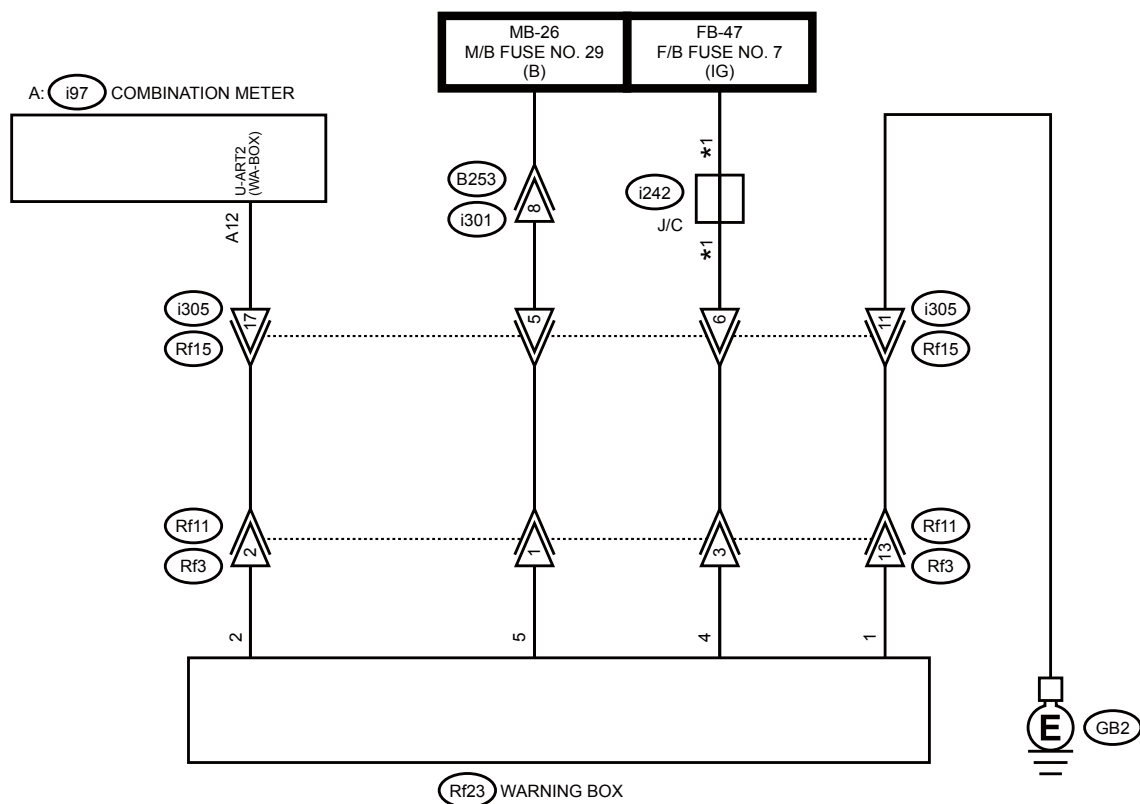
No

Repair or replace the defective part.

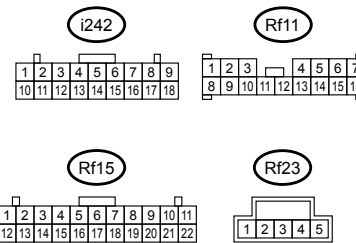
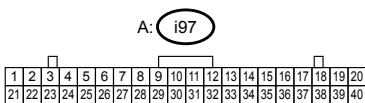
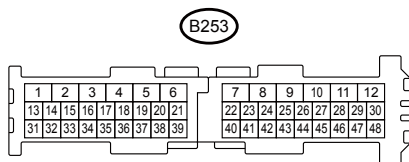
8. PASSENGER'S SEAT BELT WARNING LIGHT DOES NOT ILLUMINATE

Wiring diagram:

Combination meter system  [Ref. to WIRING SYSTEM>Combination Meter System>WIRING DIAGRAM.](#)



*1 : TERMINAL No. OPTIONAL ARRANGEMENT AMONG 13, 14, 15, 16, 17 AND 18



1. CHECK FUNCTION.



1. Sit on the passenger's seat and disconnect the seat belt.
2. Turn the ignition switch to ON (engine OFF).
3. Fasten and detach the passenger's seat belt buckle.

Does the seat belt warning light display vary according to the operation of the seat belt buckle?

Yes


It may be a temporary poor contact. Check the contacting condition of harness and connector.

No

 [Go to 2.](#)

2. CHECK DATA MONITOR.



1. Using Subaru Select Monitor, display [Passenger side seat belt state] in [Data monitor] of [Combination Meter].  [Ref. to COMMON \(DIAGNOSTICS\)>Data Monitor.](#)
2. Fasten and detach the passenger's side seat belt buckle, and read the data of the seat belt buckle switch.

Does the display vary according to the operation of the seat belt buckle?

Yes

 [Go to 5.](#)

No

 [Go to 3.](#)

3. CHECK DTC.



Using the Subaru Select Monitor, read all DTCs.  [Ref. to LAN SYSTEM \(DIAGNOSTICS\)>Diagnostic Trouble Code \(DTC\).](#)

Is DTC displayed?

Yes


Perform the diagnosis for the displayed DTCs.

No

 [Go to 4.](#)

4. CHECK AIRBAG CONTROL MODULE AND COMBINATION METER.



Inspect LAN system.  [Ref. to LAN SYSTEM \(DIAGNOSTICS\)>Basic Diagnostic Procedure>PROCEDURE.](#)

Is the check result OK?

Yes

 [Go to 5.](#)

No

Follow the diagnostic procedure and repair or replace the defective part.

5. CHECK WARNING BOX POWER SUPPLY VOLTAGE.



1. Turn the ignition switch to OFF.
2. Disconnect the warning box connector.
3. Turn the ignition switch to ON.
4. Measure the voltage between the warning box connector and chassis ground.

Connector & terminal

(Rf23) No. 4 (+) — Chassis ground (—):

(Rf23) No. 5 (+) — Chassis ground (—):

Is the voltage 10 V or more?

Yes

 [Go to 6.](#)

No

Repair or replace the defective part.

6. CHECK WARNING BOX GROUND CIRCUIT.



1. Turn the ignition switch to OFF.
2. Measure the resistance between the warning box connector and chassis ground.

Connector & terminal

(Rf23) No. 1 — Chassis ground:

Is the resistance less than 10 Ω ?

Yes

 [Go to 7.](#)

No

Repair or replace the defective part.

7. CHECK HARNESS BETWEEN WARNING BOX AND COMBINATION METER.



1. Disconnect the connector of combination meter.
2. Measure the resistance between warning box and combination meter.

Connector & terminal

(Rf23) No. 2 — (i97) No. 12:

Is the resistance less than 10 Ω ?

Yes

 [Go to 8.](#)

No

Repair or replace the defective part.

8. CHECK WARNING BOX AND COMBINATION METER.




1. Remove the warning box, and install a properly operating warning box (new warning box).
2. Connect the connector and then turn the ignition switch to ON.

Is the warning box properly displayed?

Yes

Replace the warning box.  [Ref. to INSTRUMENTATION/DRIVER INFO>Warning Box.](#)

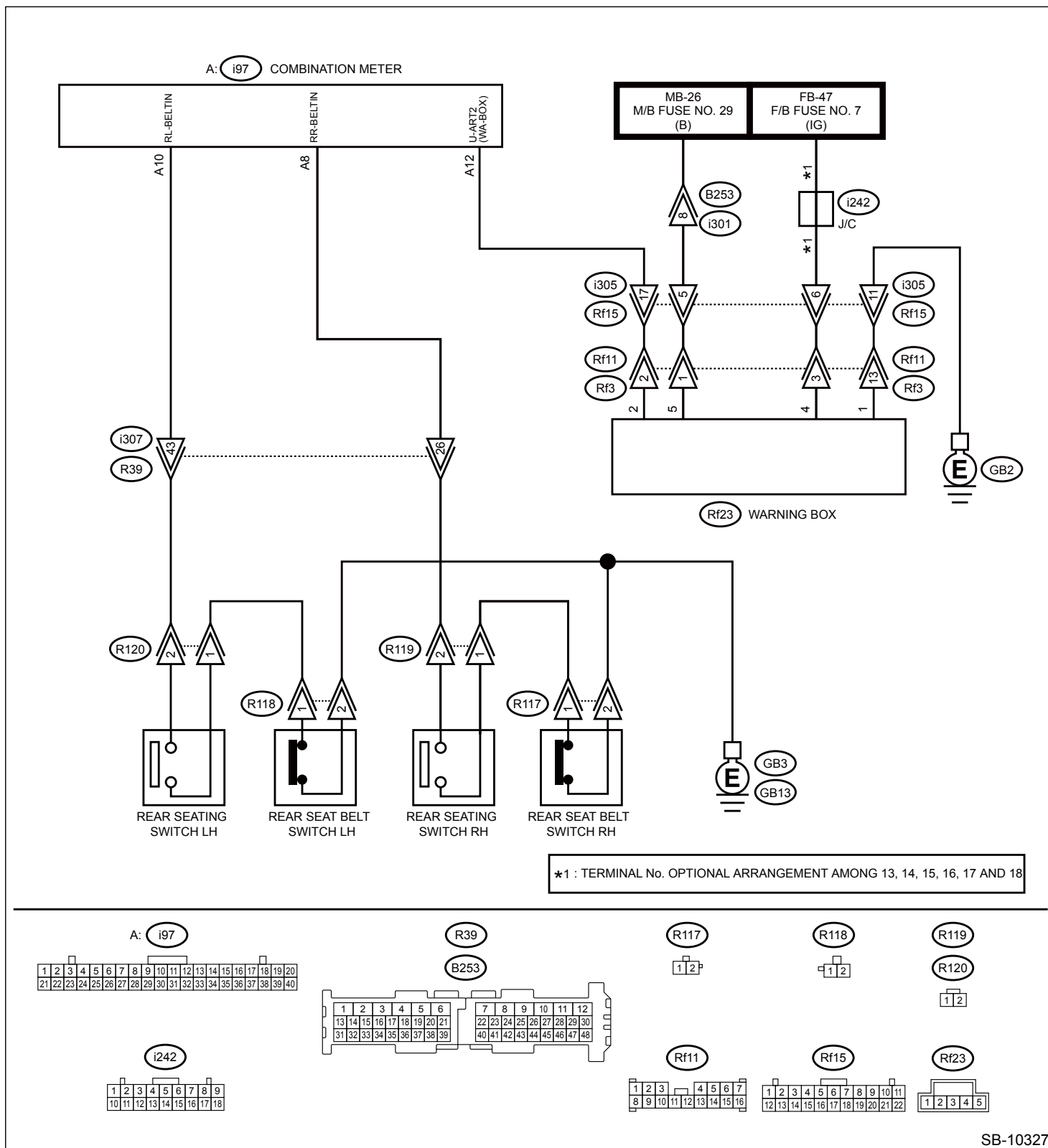
No

Replace the combination meter assembly.  [Ref. to INSTRUMENTATION/DRIVER INFO>Combination Meter.](#)

9. REAR SEAT BELT WARNING LIGHT DOES NOT ILLUMINATE

Wiring diagram:

Seat belt warning system  [Ref. to WIRING SYSTEM>Seat Belt Warning System>WIRING DIAGRAM.](#)



1. CHECK FUNCTION.



1. Sit on each rear seat position and disconnect the seat belt.
2. Turn the ignition switch to ON (engine OFF).
3. Fasten and detach the rear seat belt buckle.

Does the rear seat belt warning light illuminate or go off?

Yes


It may be a temporary poor contact. Check the contacting condition of harness and connector.

No

 [Go to 2.](#)

2. CHECK DATA MONITOR.



1. Using the Subaru Select Monitor, display the following items in the [Data monitor] of [Combination Meter].  [Ref. to COMMON \(DIAGNOSTICS\)>Data Monitor.](#)
 - [Rear seat right seat-belt wearing state]
 - [Rear seat left seat-belt wearing state]
2. Fasten and detach the rear seat belt buckle at each position, and read the data of the seat belt buckle switch.

Does the display vary according to the operation of the seat belt buckle?

Yes

It may be a temporary poor contact. Check the contacting condition of harness and connector.

No

 [Go to 3.](#)

3. CHECK WARNING BOX POWER SUPPLY CIRCUIT.



1. Turn the ignition switch to OFF.
2. Disconnect the warning box connector.
3. Turn the ignition switch to ON.
4. Measure the voltage between the warning box connector and chassis ground.


Connector & terminal

(Rf23) No. 4 (+) — Chassis ground (—):

(Rf23) No. 5 (+) — Chassis ground (—):

Is the voltage 10 V or more?

Yes

 [Go to 4.](#)

No

Repair or replace the defective part.

4. CHECK WARNING BOX GROUND CIRCUIT.




1. Turn the ignition switch to OFF.
2. Measure the resistance between the warning box connector and chassis ground.

Connector & terminal

(Rf23) No. 1 — Chassis ground:

Is the resistance less than 10 Ω ?

Yes

 [Go to 5.](#)

No

Repair or replace the defective part.

5. CHECK HARNESS BETWEEN WARNING BOX AND COMBINATION METER.




1. Disconnect the harness of the combination meter.
2. Measure the resistance between the warning box connector and combination meter.

Connector & terminal

(Rf23) No. 2 — (i97) No. 12:

Is the resistance less than 10 Ω ?

Yes

 [Go to 6.](#)

No

Repair or replace the defective part.

6. CHECK COMMUNICATION STATUS BETWEEN WARNING BOX AND COMBINATION METER.



1. Remove the warning box, and install a properly operating warning box (new warning box).
2. Connect the connector and then turn the ignition switch to ON.

Is the warning box properly displayed?

Yes


Replace the warning box.  [Ref. to INSTRUMENTATION/DRIVER INFO>Warning Box.](#)

No

 [Go to 7.](#)

7. CHECK REAR SEAT SEATING SENSOR.




1. Turn the ignition switch to OFF.
2. Perform unit inspection for the rear seat seating sensor.  [Ref. to SEAT BELT SYSTEM>Rear Seat Belt>INSPECTION > CHECK SEATING SENSOR MAT.](#)

Does the rear seat seating sensor operate normally?

Yes


 [Go to 8.](#)

No

Replace the rear seat seating sensor mat together with the pad & frame assembly rear cushion.  [Ref. to SEATS>Rear Seat.](#)

8. CHECK REAR SEAT BELT BUCKLE SWITCH.




Perform unit inspection for rear seat belt buckle switches.  [Ref. to SEAT BELT SYSTEM>Rear Seat Belt>INSPECTION > CHECK SEAT BELT SWITCH.](#)

Is the check result OK?

Yes

 [Go to 9.](#)

No

Replace the defective belt assembly rear INN.  [Ref. to SEAT BELT SYSTEM>Rear Seat Belt.](#)

9. CHECK HARNESS.



1. Disconnect the combination meter connector and the rear seat belt buckle switch connector.
2. Check for short circuit to battery, open circuit and short circuit to ground between the combination meter connector and the rear seat belt buckle switch connector.

Connector & terminal

RH


- (i97) No. 8 — (R119) No. 2:
- (R119) No. 1 — (R117) No. 1:
- (R117) No. 2 — Chassis ground:

LH

- (i97) No. 10 — (R120) No. 2:
- (R120) No. 1 — (R118) No. 1:
- (R118) No. 2 — Chassis ground:

Is the harness normal?

Yes

Replace the combination meter assembly.  [Ref. to INSTRUMENTATION/DRIVER INFO>Combination Meter.](#)







No

Repair or replace the defective part.

SEAT BELT SYSTEM > Seat Belt Warning System

NOTE

For procedure of components in the seat belt warning system, refer to the sections below.


- Combination meter assembly:  [Ref. to INSTRUMENTATION/DRIVER INFO>Combination Meter.](#)
- Warning box:  [Ref. to INSTRUMENTATION/DRIVER INFO>Warning Box.](#)
- Belt assembly front:  [Ref. to SEAT BELT SYSTEM>Front Seat Belt.](#)
- Belt assembly rear:  [Ref. to SEAT BELT SYSTEM>Rear Seat Belt.](#)
- Front seat:  [Ref. to SEATS>Front Seat.](#)
- Rear seat cushion:  [Ref. to SEATS>Rear Seat.](#)








SEAT BELT SYSTEM > Front Seat Belt

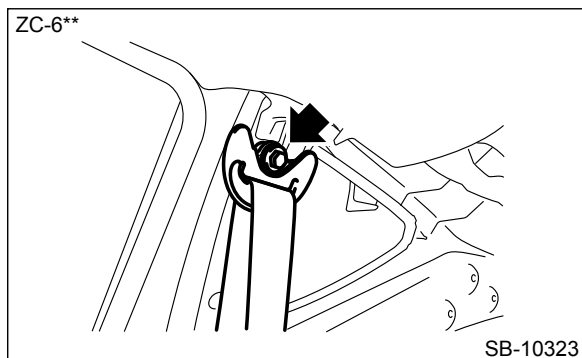
REMOVAL


1. BELT ASSEMBLY FRONT OUT

Caution:

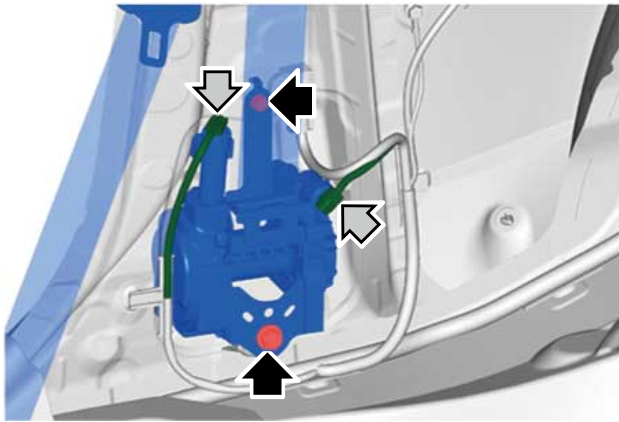
- Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM".  [Ref. to AIRBAG SYSTEM>General Description>CAUTION.](#)
- Do not drop or subject the pretensioner to any impact.
- Since the pretensioner and bracket are integrated as a unit, do not disassemble them.

1. Tilt the front seat backrest assembly forward, and move the front seat all the way forward.
2. Disconnect the ground terminal from the battery sensor, and wait for at least 60 seconds before starting work.  [Ref. to REPAIR CONTENTS>NOTE > BATTERY.](#)
3. Remove the cushion assembly rear seat and the backrest assembly rear seat.  [Ref. to SEATS>Rear Seat>REMOVAL.](#)
4. Remove the cover side sill front Rr and the cover side sill front Ft.  [Ref. to EXTERIOR/INTERIOR TRIM>Lower Inner Trim>REMOVAL.](#)
5. Remove the weather strip body side flange front.  [Ref. to EXTERIOR BODY PANELS>Weather Strip>REPLACEMENT.](#)
6. Remove the trunk trim panel side.  [Ref. to EXTERIOR/INTERIOR TRIM>Trunk Room Trim>REMOVAL.](#)
7. Remove the trim panel assembly quarter.  [Ref. to EXTERIOR/INTERIOR TRIM>Rear Quarter Trim>REMOVAL.](#)
8. Remove the trim panel assembly B pillar.  [Ref. to EXTERIOR/INTERIOR TRIM>Upper Inner Trim>REMOVAL > B PILLAR TRIM.](#)
9. Remove the belt assembly front OUT.
 - (1) Remove the anchor bolts of seat belts.

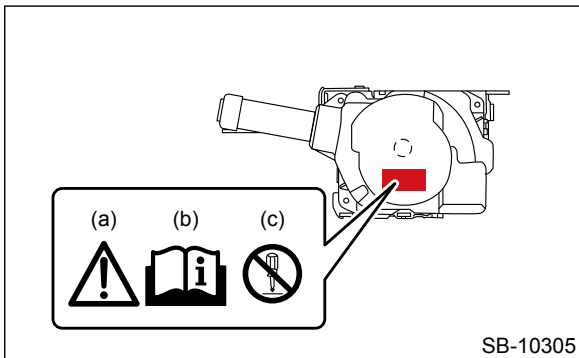


- (2) Disconnect connector of the pretensioner.  [Ref. to AIRBAG SYSTEM>Airbag Connector>PROCEDURE > KNEE AIRBAG MODULE, CURTAIN AIRBAG MODULE, DRIVER'S AIRBAG MODULE, FRONT SEAT BELT PRETENSIONER & ADAPTIVE FORCE LIMITER \(PASSENGER'S SIDE\).](#)
- (3) Remove the bolts, and then remove the belt assembly front OUT.

ZD-*AU





AB-11954




SB-10305



Meaning of pictograms indicated on the label

- (a) Instantaneous flammable substance encapsulated parts; be careful of handling.
- (b) Before handling, always refer to "CAUTION" of "General Description" in "SEAT BELT SYSTEM" in the service manual.  [Ref. to SEAT BELT SYSTEM>General Description>CAUTION.](#)
For the disposal procedures of pretensioners, refer to "Disposal of Pretensioner".  [Ref. to SEAT BELT SYSTEM>Disposal of Pretensioner.](#)
- (c) Do not disassemble the pretensioner.

2. BELT ASSEMBLY FRONT INN

Caution:

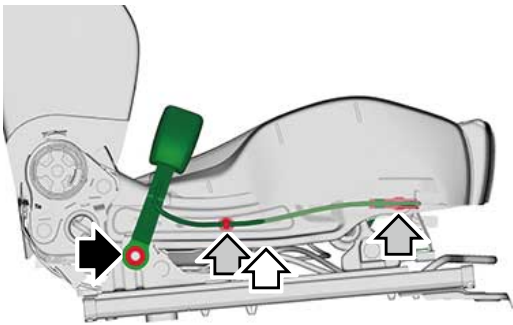
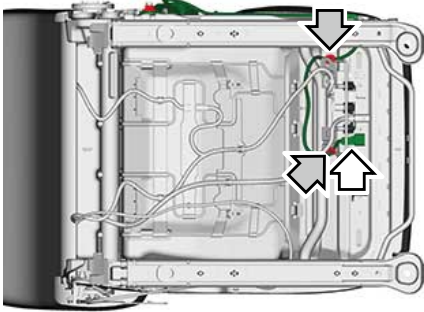
Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM".  [Ref. to AIRBAG SYSTEM>General Description>CAUTION.](#)

1. Disconnect the ground terminal from the battery sensor, and wait for at least 60 seconds before starting work.  [Ref. to REPAIR CONTENTS>NOTE > BATTERY.](#)
2. Remove the front seats.  [Ref. to SEATS>Front Seat>REMOVAL.](#)
3. Remove the belt assembly front INN.
 - (1) Unfasten the J-fastener.
 - (2) Remove the seat belt harness clips.
 - (3) Remove the nut, and then remove the belt assembly front INN.

Note:

For details on harness routing behind the seat, refer to "SEATS" section.  [Ref. to SEATS>Front Seat>ASSEMBLY > CONNECTOR & HARNESS.](#)

ZD-*AU





SB-10328

SEAT BELT SYSTEM > Front Seat Belt INSTALLATION

1. BELT ASSEMBLY FRONT OUT

Caution:

Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM".  [Ref. to AIRBAG SYSTEM>General Description>CAUTION.](#)

1. Before installation, perform a unit inspection of retractor.  [Ref. to SEAT BELT SYSTEM>Front Seat Belt>INSPECTION.](#)
2. Install the belt assembly front OUT.

Caution:








- The parts of the driver and passenger sides are not the same. Before installation, make sure that the correct part is used.
- During installation, make sure that the seat belts are not twisted.
- After installation, make sure that the seat belt can be pulled out and retracted smoothly.

Tightening torque:

Refer to "COMPONENT" of "General Description" for the tightening torque.  [Ref. to SEAT BELT SYSTEM>General Description>COMPONENT > FRONT SEAT BELT.](#)


3. Connect the connector of the pretensioner.  [Ref. to AIRBAG SYSTEM>Airbag](#)

[Connector>PROCEDURE > KNEE AIRBAG MODULE, CURTAIN AIRBAG MODULE, DRIVER'S AIRBAG MODULE, FRONT SEAT BELT PRETENSIONER & ADAPTIVE FORCE LIMITER \(PASSENGER'S SIDE\).](#)

4. Install the trim panel assembly B pillar.  [Ref. to EXTERIOR/INTERIOR TRIM>Upper Inner Trim>INSTALLATION > B PILLAR TRIM.](#)
5. Install the trim panel assembly quarter.  [Ref. to EXTERIOR/INTERIOR TRIM>Rear Quarter Trim>INSTALLATION.](#)
6. Install the trunk trim panel side.  [Ref. to EXTERIOR/INTERIOR TRIM>Trunk Room Trim>INSTALLATION.](#)
7. Install the weather strip body side flange front.  [Ref. to EXTERIOR BODY PANELS>Weather Strip>REPLACEMENT.](#)
8. Install the cover side sill front Ft and the cover side sill front Rr.  [Ref. to EXTERIOR/INTERIOR TRIM>Lower Inner Trim>INSTALLATION.](#)
9. Install the backrest assembly rear seat and the cushion assembly rear seat.  [Ref. to SEATS>Rear Seat>INSTALLATION.](#)
10. Connect the ground terminal to battery sensor.  [Ref. to REPAIR CONTENTS>NOTE > BATTERY.](#)
11. After installation, check the following points.
 - The seat belt is not twisted.
 - The seat belt can be pulled out and retracted smoothly.
 - The shoulder anchor can be moved smoothly.
 - Check that the airbag warning light lights up for approximately 6 seconds and then turns off when connecting the ground terminal to the battery sensor and turning the ignition switch to ON.

2. BELT ASSEMBLY FRONT INN

Caution:


Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM".  [Ref. to AIRBAG SYSTEM>General Description>CAUTION.](#)

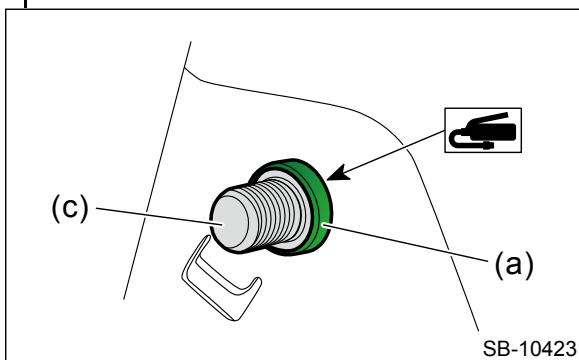
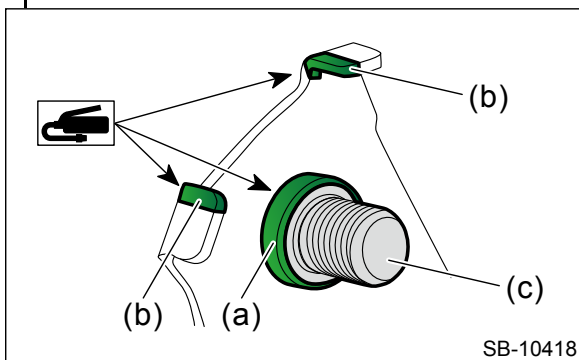
1. Install the belt assembly front INN.

Caution:

- Before installation, make sure that the correct part is used.
 - Make sure that the seat belt harness is not caught anywhere. Wrong harness routing may cause the harness short from pinch.
 - Do not forget the spring wave washer, when installing the belt assembly front INN.
 - Apply grease to the bolt stepped section (a) and the stopper section (b) when replacing the frame assembly cushion front seat, belt assembly front INN, and spring wave washer.
- Apply a thin coat of grease to both sides of the spring wave washer.
Do not apply grease to the thread and the nut tightening surface (c).
Use grease not containing silicone. Vaporized silicone may adhere to the electrical contact and lead to poor continuity.

Preparation items:

Grease: IDEMITSU APOLLOIL AUTOLEX A or equivalent  [Ref. to RECOMMENDED MATERIALS > GREASE.](#)



- (1) Install in the order of spring wave washer, belt assembly front INN and nut.




Tightening torque:

38 N·m (3.9 kgf-m, 28.0 ft-lb)

- (2) Locate the seat belt harness and retain it with a harness clip.

Note:

For details on harness routing behind the seat, refer to "SEATS" section.  [Ref. to SEATS>Front Seat>ASSEMBLY > CONNECTOR & HARNESS.](#)

2. Install the front seat.  [Ref. to SEATS>Front Seat>INSTALLATION.](#)
3. Connect the ground terminal to battery sensor.  [Ref. to REPAIR CONTENTS>NOTE > BATTERY.](#)
4. If the passenger's seat is removed, perform [Rezeroing] in the occupant detection system.  [Ref. to AIRBAG\(DIAGNOSTICS\)>Rezero.](#)

INSPECTION

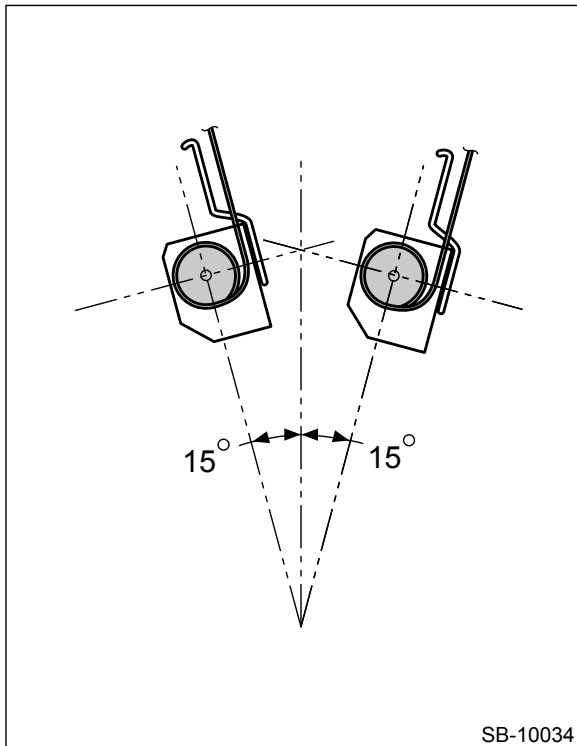
1. VISUAL INSPECTION

Check for the following, and replace with new parts if necessary.

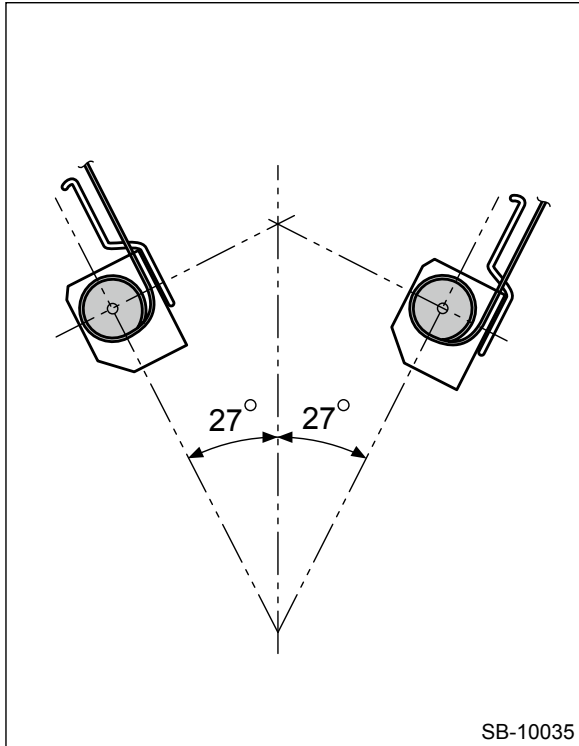
- Pretensioner is cracked or deformed.
- Shoulder anchor is cracked or deformed.
- Seat belt is slackened, bent or worn.
- Seat belt is abnormally wound or extended.
- Belt assembly front INN is deformed or damaged.
- Seat belt buckle cannot be engaged properly.

2. ELR LOCK MECHANISM INSPECTION

1. Hold the retractor upright (as installed in the vehicle) and check the ELR lock mechanism.
2. Tilt the retractor from the upright posture and check the following points.
 - It does not lock if the inclination angle is 15° or less.



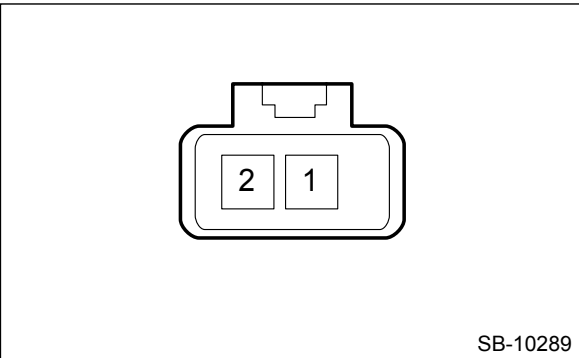
- It remains locked if the inclination angle is 27° or more.



3. If the ELR lock mechanism does not operate properly, replace the belt assembly front OUT with a new part.

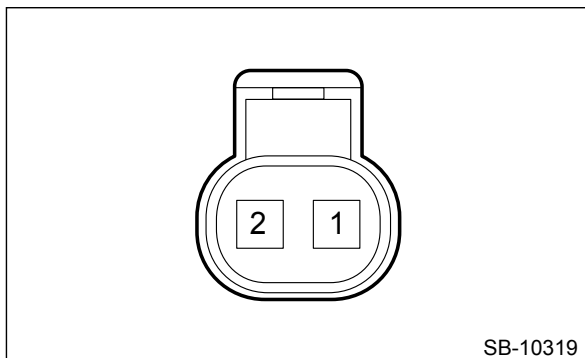
3. CHECK SEAT BELT BUCKLE SWITCH

- Driver's seat
Check the resistance between the terminals when the belt assembly front INN is in each of the following operation conditions.



Terminal No.	Inspection conditions	Standard
2 — 1	Tongue plate inserted	1 MΩ or more
2 — 1	Tongue plate detached	1 Ω or less

- Replace the belt assembly front INN if the inspection result is not within the standard.
- Passenger's seat
Measure the current value between the terminals when the belt assembly front INN is in each of the following operation conditions.





Terminal No.	Inspection conditions	Standard
2 — 1	Tongue plate inserted	12 — 18 mA
2 — 1	Tongue plate detached	4 — 7 mA




Replace the belt assembly front INN if the inspection result is not within the standard.

4. CHECK SEAT BELT WARNING LIGHT

1. Check the seat belt warning light.

- Driver's seat:  [Ref. to SEAT BELT SYSTEM>Seat Belt Warning System>INSPECTION > CHECK DRIVER'S SEAT BELT WARNING LIGHT.](#)
- Passenger's seat:  [Ref. to SEAT BELT SYSTEM>Seat Belt Warning System>INSPECTION > CHECK PASSENGER'S SEAT BELT WARNING LIGHT.](#)

2. If the inspection result indicates an improper operation, check the seat belt buckle switch and seat belt warning system.


- Seat belt buckle switch:  [Ref. to SEAT BELT SYSTEM>Front Seat Belt>INSPECTION > CHECK SEAT BELT BUCKLE SWITCH.](#)
- Driver's seat belt warning system:  [Ref. to SEAT BELT SYSTEM>Seat Belt Warning System>INSPECTION > DRIVER'S SEAT BELT WARNING LIGHT DOES NOT ILLUMINATE.](#)
- Passenger's seat belt warning system:  [Ref. to SEAT BELT SYSTEM>Seat Belt Warning System>INSPECTION > PASSENGER'S SEAT BELT WARNING LIGHT DOES NOT ILLUMINATE.](#)







SEAT BELT SYSTEM > Rear Seat Belt

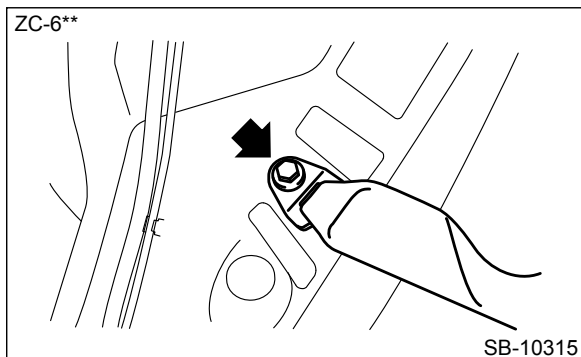
REMOVAL

1. BELT ASSEMBLY REAR OUT

Caution:

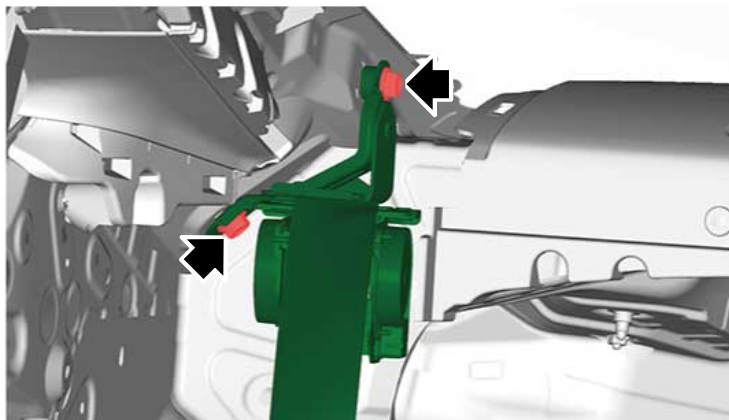
Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM".  [Ref. to AIRBAG SYSTEM>General Description>CAUTION.](#)

1. Disconnect the ground terminal from the battery sensor, and wait for at least 60 seconds before starting work.  [Ref. to REPAIR CONTENTS>NOTE > BATTERY.](#)
2. Remove the cushion assembly rear seat and the backrest assembly rear seat.  [Ref. to SEATS>Rear Seat>REMOVAL.](#)
3. Remove the cover side sill front Rr and the cover side sill front Ft.  [Ref. to EXTERIOR/INTERIOR TRIM>Lower Inner Trim>REMOVAL.](#)
4. Remove the weather strip body side flange front.  [Ref. to EXTERIOR BODY PANELS>Weather Strip>REPLACEMENT.](#)
5. Remove the trunk trim panel side.  [Ref. to EXTERIOR/INTERIOR TRIM>Trunk Room Trim>REMOVAL.](#)
6. Remove the trim panel assembly quarter and the trim panel assembly C pillar rear.  [Ref. to EXTERIOR/INTERIOR TRIM>Rear Quarter Trim>REMOVAL.](#)
7. Remove the belt assembly rear OUT.
 - (1) Remove the lower anchor bolt of the belt assembly rear OUT.



- (2) Remove the bolt, and then remove the belt assembly rear OUT.


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SB-10316

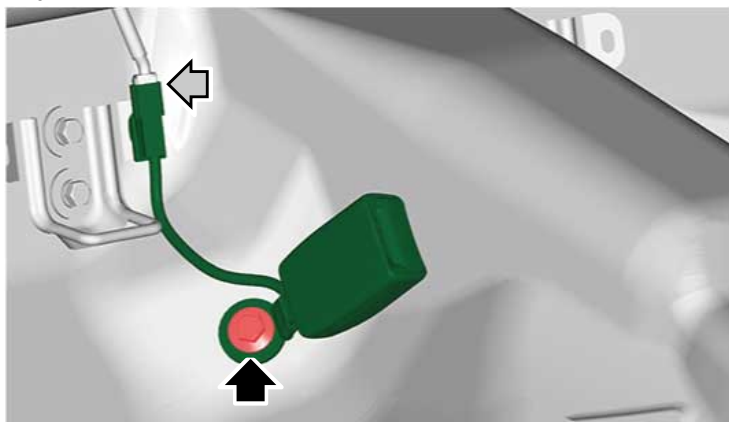
2. BELT ASSEMBLY REAR INN

Caution:

Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM".  [Ref. to AIRBAG SYSTEM>General Description>CAUTION.](#)

1. Disconnect the ground terminal from the battery sensor, and wait for at least 60 seconds before starting work.  [Ref. to REPAIR CONTENTS>NOTE > BATTERY.](#)
2. Remove the cushion assembly rear seat.  [Ref. to SEATS>Rear Seat>REMOVAL.](#)
3. Remove the belt assembly rear INN.
 - (1) Disconnect the connector.
 - (2) Remove the bolts and then remove the belt assembly rear INN.

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SB-10317


SEAT BELT SYSTEM > Rear Seat Belt

INSTALLATION

1. BELT ASSEMBLY REAR OUT

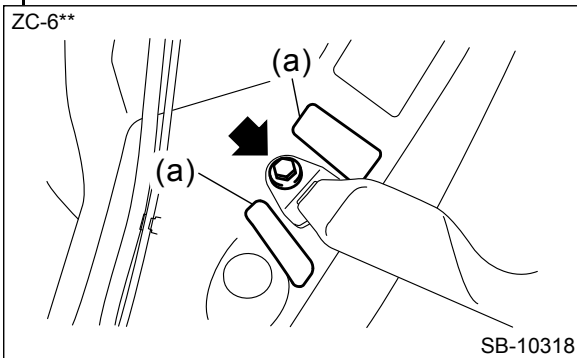
Caution:

Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM".  [Ref. to AIRBAG SYSTEM>General Description>CAUTION.](#)







1. Before installation, perform a unit inspection of retractor.  [Ref. to SEAT BELT SYSTEM>Rear Seat Belt>INSPECTION.](#)
2. Install the belt assembly rear OUT.

Caution:


- During installation, make sure that the seat belts are not twisted.
- After installation, make sure that the seat belts are smoothly extended and wound.
- Be careful not to allow the anchor plate to ride over the location section (a).

**Tightening torque:**

30 N·m (3.1 kgf-m, 22.1 ft-lb)

3. Install the trim panel assembly C pillar rear and the trim panel assembly quarter.  [Ref. to EXTERIOR/INTERIOR TRIM>Rear Quarter Trim>INSTALLATION.](#)
4. Install the trunk trim panel side.  [Ref. to EXTERIOR/INTERIOR TRIM>Trunk Room Trim>INSTALLATION.](#)
5. Install the weather strip body side flange front.  [Ref. to EXTERIOR BODY PANELS>Weather Strip>REPLACEMENT.](#)
6. Install the cover side sill front Ft and the cover side sill front Rr.  [Ref. to EXTERIOR/INTERIOR TRIM>Lower Inner Trim>INSTALLATION.](#)
7. Install the backrest assembly rear seat and the cushion assembly rear seat.  [Ref. to SEATS>Rear Seat>INSTALLATION.](#)
8. Connect the ground terminal to battery sensor.  [Ref. to REPAIR CONTENTS>NOTE > BATTERY.](#)
9. After installation, check the following points.
 - The seat belt is not twisted.
 - The seat belt can be pulled out and retracted smoothly.



2. BELT ASSEMBLY REAR INN**Caution:**

Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM".  [Ref. to AIRBAG SYSTEM>General Description>CAUTION.](#)

1. Install the belt assembly rear INN.

Tightening torque:

30 N·m (3.1 kgf-m, 22.1 ft-lb)

2. Install the cushion assembly rear seat.  [Ref. to SEATS>Rear Seat>INSTALLATION.](#)
3. Connect the ground terminal to battery sensor.  [Ref. to REPAIR CONTENTS>NOTE > BATTERY.](#)
4. After installation, check the following points.
 - The seat belt is not twisted.
 - The seat belt engagement can be performed smoothly.

SEAT BELT SYSTEM > Rear Seat Belt

INSPECTION

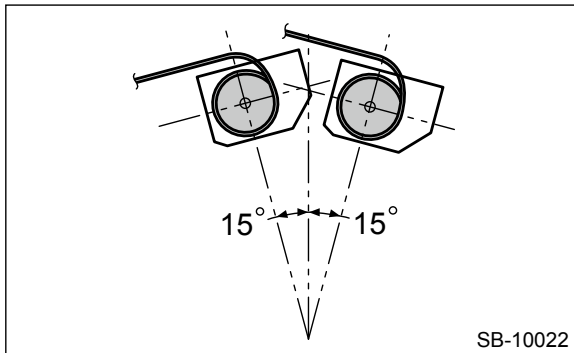
1. VISUAL INSPECTION

Check for the following, and replace with new parts if necessary.

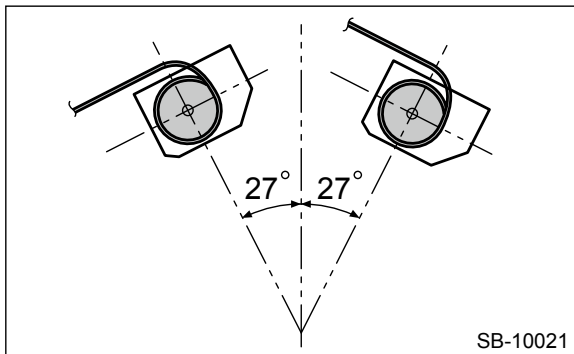
- Seat belt is slackened, bent or worn.
- Seat belt is abnormally wound or extended.
- Belt assembly rear INN is deformed or damaged.
- Seat belt buckle cannot be engaged properly.

2. ELR LOCK MECHANISM INSPECTION

1. Hold the retractor upright (as installed in the vehicle) and check the ELR lock mechanism.
2. Tilt the retractor from the upright posture and check the following points.
 - It does not lock if the inclination angle is 15° or less.



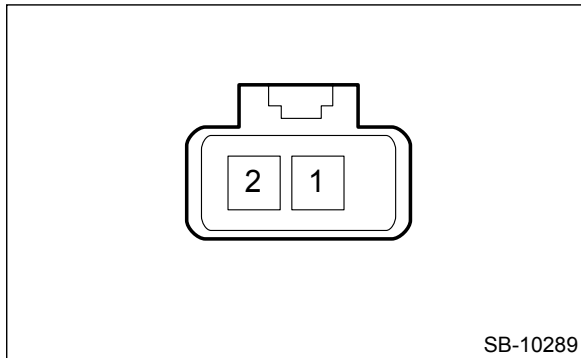
- It remains locked if the inclination angle is 27° or more.



3. If the ELR lock mechanism does not operate properly, replace the belt assembly rear OUT with a new part.

3. CHECK SEAT BELT SWITCH

1. Measure the resistance between the terminals using each belt assembly rear INN inspection conditions.

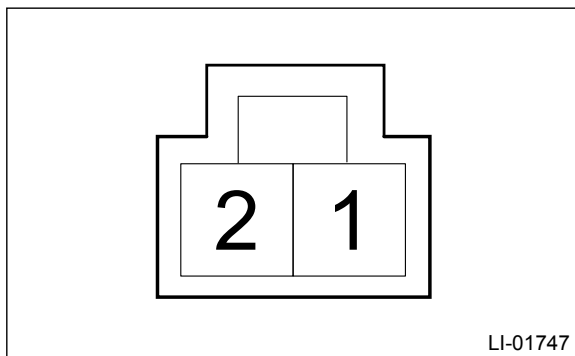


Terminal No.	Inspection conditions	Standard
2 — 1	Tongue plate inserted	1 MΩ or more
2 — 1	Tongue plate detached	1 Ω or less

2. Replace the belt assembly rear INN if the inspection result is not within the standard value.

4. CHECK SEATING SENSOR MAT

1. Disconnect the connector of the seat belt buckle switch and seating sensor mat.
2. Measure the resistance between the terminals when the seating sensor mat is in each of the following operation conditions.





Terminal No.	Inspection conditions	Standard
1 — 2	Sit on the rear seat	1 Ω or less
1 — 2	Do not sit on the rear seat	1 MΩ or more

3. Replace the rear seating sensor mat together with the seat cushion pad if the inspection result is not within the standard value.

5. CHECK SEAT BELT WARNING LIGHT

1. Check the rear seat belt warning light. [Ref. to SEAT BELT SYSTEM>Seat Belt Warning System>INSPECTION > CHECK REAR SEAT BELT WARNING LIGHT.](#)
2. If the inspection result indicates an improper operation, check the rear seat belt switch and rear seat


belt warning system.



- Rear seat belt buckle switch:  [Ref. to SEAT BELT SYSTEM>Rear Seat Belt>INSPECTION > CHECK SEAT BELT SWITCH.](#)
- Rear seat belt warning system:  [Ref. to SEAT BELT SYSTEM>Seat Belt Warning System>INSPECTION > REAR SEAT BELT WARNING LIGHT DOES NOT ILLUMINATE.](#)

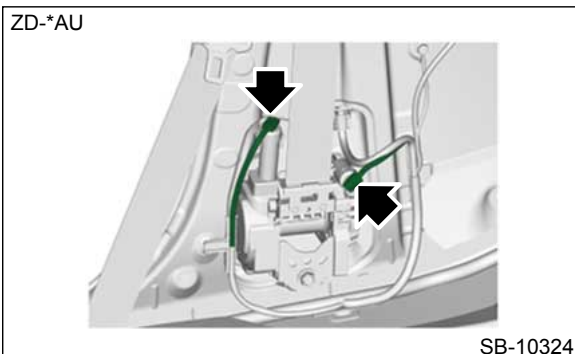
SEAT BELT SYSTEM > Disposal of Pretensioner

PROCEDURE

Caution:

- Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM".  [Ref. to AIRBAG SYSTEM>General Description>CAUTION.](#)
- Before discarding a pretensioner, always perform an activation process to prevent any false activation.
- Wear protective gloves, safety goggles and earplugs during this operation. Wash your hands afterwards.
- Do not touch the pretensioner just after activation because it is very hot. Before handling it for disposal, wait for 40 minutes.
- Perform a pretensioner operation process in a safe, level place. Do not perform the process outdoors when there is a strong rain or wind.
- Perform seat belt operation process at each location one after another. Do not perform operation process simultaneously on front pretensioner and adaptive force limiter.
- Do not drop or damage the pretensioner.
- A large explosive noise will occur when the pretensioner is deployed. Warn persons in the area, and do not allow anyone to approach a radius of 5 m (16 ft) from the activation site.
- After activating the pretensioner, smoke may arise. Therefore, always perform an operation process in a well-ventilated place without any smoke sensor.
- Do not expose the activated pretensioner to water.
- Wrap the activated pretensioner in a sealed vinyl bag when discarding.
- If it is impossible to perform a pretensioner activation process due to some situational reasons, consult SUBARU dealership or one of the authorized workshops.

1. Tilt the front seat backrest assembly forward, and move the front seat all the way forward.
2. Disconnect the ground terminal from the battery sensor, and wait for at least 60 seconds before starting work.  [Ref. to REPAIR CONTENTS>NOTE > BATTERY.](#)
3. Disconnect connector of the pretensioner.  [Ref. to AIRBAG SYSTEM>Airbag Connector>PROCEDURE > KNEE AIRBAG MODULE, CURTAIN AIRBAG MODULE, DRIVER'S AIRBAG MODULE, FRONT SEAT BELT PRETENSIONER & ADAPTIVE FORCE LIMITER \(PASSENGER'S SIDE\).](#)



4. Activate each pretensioner.

Preparation tool:

ST1: AIRBAG DEPLOYMENT TOOL (98299PA030)

ST2: TEST HARNESS ADAPTER D (98299SA010)

Front pretensioner

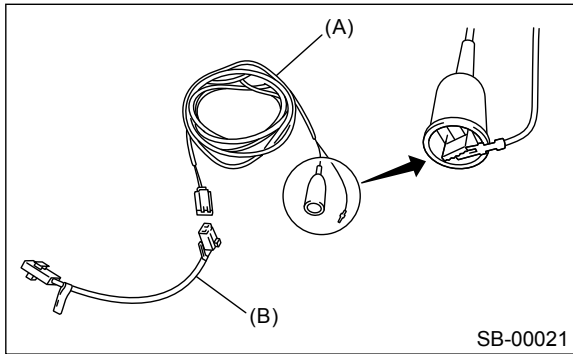
Adaptive force limiter

- (1) Short the ST1 alligator clip to the terminal.

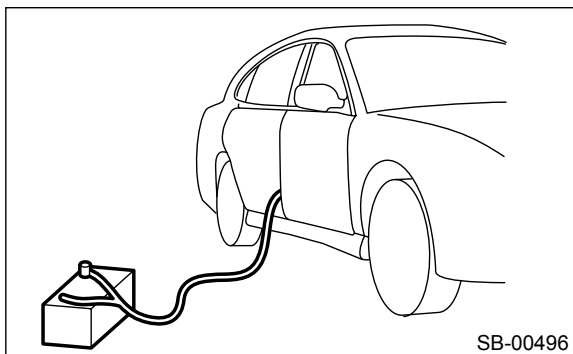
Caution:

Short ST1 terminals until just before the pretensioner operation process.

- (2) Connect the ST1 (A) with ST2 (B).



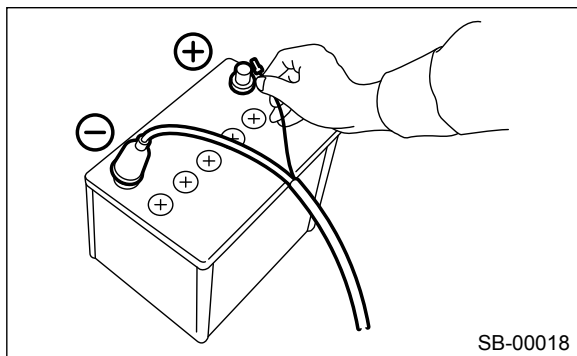
- (3) Connect the connector of ST2 to the pretensioner or adaptive force limiter.
(4) Make sure there is no one inside the vehicle.
(5) Extend the wiring of ST1 to the limit, and close all the windows completely.




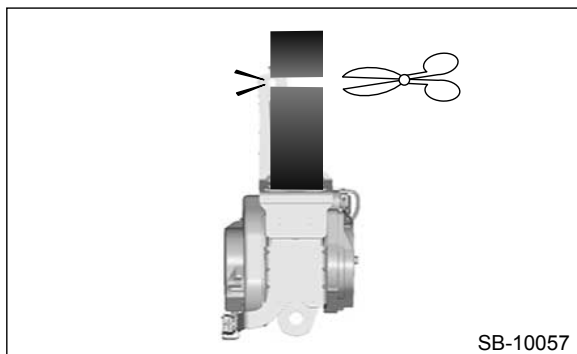
- (6) Move the battery 5 m (16 ft) or more from the vehicle, and affix nearby.
(7) Connect the ST1 alligator clip to the battery negative (–) terminal.
(8) Connect the other cable of ST1 to the battery positive (+) terminal, and activate the pretensioner.

Caution:

- **After activation, the pretensioner will be extremely hot. Let it cool down for at least 40 minutes in an area with no one around.**
- **Do not expose the activated pretensioner to water.**



- 5.** Remove the seat belt outer.  [Ref. to SEAT BELT SYSTEM>Front Seat Belt>REMOVAL > BELT ASSEMBLY FRONT OUT.](#)
- 6.** Cut the seat belt at a position as close as possible to the seat belt retractor.



- 7.** Place the activated pretensioner in a sealed vinyl bag, then discard.

